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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,296	10/10/2000	Douglas D. Randall	UMO-1482.1	4557

321 7590 04/22/2002

SENNIGER POWERS LEAVITT AND ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER

KALLIS, RUSSELL

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 04/22/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/685,296

Applicant(s)

RANDALL ET AL.

Examiner

Russell Kallis

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,8,12,16,20-24 and 28-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 4,8,12,16,20-24 and 28-44 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

- I. Claims 4, 8, 12, 16, 20, 28 and 44 are drawn to polypeptides, classified in class 930, subclass 10 for example.
- II. Claims 21-24 are drawn to a DNA molecule encoding a modified branched chain oxoacid dehydrogenase complex with an E2 component binding region replaced with an E2 component binding region from a plastid pyruvate dehydrogenase complex E1 β subunit, vector and host cell, classified in class 435, subclass 419 for example.
- III. Claims 29-30 are drawn to a plant that comprises an enzyme that enhances 2-oxobutyrates, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit, and an E2 component, classified in class 800, subclass 298 for example.
- IV. Claims 31-33 are drawn to a plant that comprises in its genome DNAs encoding an enzyme that enhances 2-oxobutyrates, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit, an E2 component, a β -ketothiolase, a β -ketoacyl-CoA reductase; and a polyhydroxyalkanoate synthase and a method of production of P(3HB-co-3HV) by growing said plants, classified in class 800, subclass 278 for example.

- V. Claims 34-35 are drawn to a plant that comprises an enzyme that enhances 2-oxobutyrate, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit, an E2 component and a dihydrolipoamide dehydrogenase E3 component, classified in class 800, subclass 298 for example.
- VI. Claims 36-38 are drawn to a plant that comprises in its genome DNAs encoding an enzyme that enhances 2-oxobutyrate, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit, an E2 component, a dihydrolipoamide dehydrogenase E3 component, a β -ketothiolase, a β -ketoacyl-CoA reductase, a polyhydroxyalkanoate synthase, and a method of production of P(3HB-co-3HV) by growing said plant classified in class 800, subclass 278 for example.
- VII. Claims 39-40 are drawn to a plant that comprises an enzyme that enhances 2-oxobutyrate, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit with an E2 binding region replaced with the E2 binding region from a plastid pyruvate dehydrogenase complex E1 β subunit, classified in class 435, subclass 468 for example.
- VIII. Claims 41-43 are drawn to a plant that comprises in its genome DNAs encoding an enzyme that enhances 2-oxobutyrate, a branched chain oxoacid dehydrogenase complex E1 α subunit, an E1 β subunit having an E2 binding region replaced with the E2 binding region from the plastid pyruvate dehydrogenase complex E1 β subunit, a β -ketothiolase, a β -ketoacyl-CoA reductase, a polyhydroxyalkanoate synthase, and a method of production of P(3HB-co-3HV) by growing said plant classified in class 536, subclass 23.2 for example.

Inventions I-VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the polypeptide of Group I, the DNA of Group II, and the plants of Groups III-IV differ in composition, structure and function. Furthermore, the plant of Groups III, IV, V, VI, VII and VIII differ in the combination of DNAs that they encompass and the phenotypic effect. Different searches and considerations would be required for examination of the different plants.

Upon election of Group I or II, Applicant is additionally required to elect a single nucleotide or amino acid sequence as appropriate. This requirement is not to be construed as a requirement for an election of species, since each of the nucleic acid sequences or amino acid sequences recited in alternative form is not a member of a single structurally and functionally related genus, but rather constitutes an independent and patentably distinct invention. Separate searches and considerations would be required for examination of each of the nucleic acid sequences or amino acid sequences.

Because the inventions are distinct for the reasons given above and have required a separate status in the art as shown by their different classifications, recognized divergent subject matter, and because the search required for one of the groups is not required for another restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37) CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kallis whose telephone number is (703) 305-5417. The examiner can normally be reached on Monday-Friday from 8:30-5:00 PM.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone number for this Group is (703) 308-4242 or (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application, or if the examiner cannot be reached as indicated above, should be directed to the legal analyst, Kim Davis, whose telephone number is (703) 308-0009.

Russell Kallis Ph.D.
April 17, 2002

A handwritten signature in cursive script, appearing to read "Amy Nelson", written in black ink.

AMY J. NELSON, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600